

Notice of Allowability

Application No.

10/764,929

Examiner

Hung T. Vy

Applicant(s)

SCHMITKONS ET AL.

Art Unit

2821

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the preliminary amendment filed on 4/29/2005.
2. ☒ The allowed claim(s) is/are 1,3,4,6-14 and 23-27.
3. ☒ The drawings filed on 14 April 2003 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date 4/29/05 & 05/10/04
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413),
Paper No./Mail Date 05/25/05
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

Primary

Examiner's Amendment

1. An examiner's amendment to the record appears below. Should the changes and /or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR

1.3.12. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

2. The following claim has been amended upon agreement by applicant during a telephone conversation with Mr. William R. Allen on 05/25/2005.

Cancel claims 2, 5 and 15-22.

Amendments to the Specification:

Please replace the paragraph beginning at page 6, line 11, with the following rewritten paragraph:

--Power supply 10 is operative for providing high voltage DC power over electrical cable 18 to the anode of the magnetrons 12, 13, regulated AC power over electrical cable 18 to a filament 26 of the magnetron 12 and a filament 27 of magnetron 13, and regulated ~~low-voltage~~ low-voltage AC power over electrical cable 18 to blower 17. In addition, electrical cable 18 incorporates conductors for transmitting low-voltage control and sensor signals between power supply 10 and lamp head 14. For example, lamp head 14 includes various different sensors 28, such as light detectors that sense the presence of output from the lamp 20 and pressure sensors that provide feedback signals to the power supply 10 for ensuring proper operation of the lamp system 16. The invention contemplates that the blower 17 may be a separate unit from the lamp head 14 that provides a flow of cooling air to an inlet of the lamp head 14 and that is powered by a power source other than power supply 10.--

Please replace the paragraph beginning at page 7, line 16, with the following rewritten paragraph:

--An outer jacket of polyvinyl chloride (PVC) or the like may be provided radially outward of the outer electrostatic shield 36. Each of the individual conductors 30, 34 is encased in an outer polymer jacket to provide inter-conductor electrical isolation. In one embodiment, each of the individual conductors 30, 34 are 30 gauge wires. The electrostatic shields 32, 36 may be a composite structure constituted by a braided conductor and ~~[[an]]~~ a radially-inward aluminized MYLAR® covering.—

AMENDMENTS TO THE CLAIMS IN THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Currently Amended) A lamp system for generating ultraviolet radiation, comprising:

a power supply;

a lamp head including a lamp capable of generating ultraviolet radiation when energized by microwave energy, a plurality of magnetrons supplying microwave energy to said lamp effective to excite a plasma in said lamp for generating ultraviolet radiation, and ~~a blower~~ at least one low-voltage device; and

a single electrical cable including a first set of conductors electrically coupling said power supply with said plurality of magnetrons and a second set of conductors electrically coupling said power supply with said ~~blower~~ at least one low-voltage device, said first set of conductors configured to carry a first voltage and said second set of conductors configured to carry a second voltage less than said first voltage.

2. (Cancelled)
3. (Previously Presented) The lamp system of claim 1 wherein said first voltage is less than about 10,000 DC Volts and said second voltage is less than about 300 AC Volts.
4. (Previously Presented) The lamp system of claim 1 wherein said first voltage is in the range of about 4,000 DC Volts to about 6,000 DC Volts.
5. (Cancelled)
6. (Currently Amended) An electrical cable for a lamp system including a power supply, a lamp head having a lamp capable of generating ultraviolet radiation when energized by microwave energy, a plurality of magnetrons supplying microwave energy effective to excite a plasma in said lamp for generating ultraviolet radiation, and ~~a blower~~ at least one low-voltage device, said electrical cable comprising:
 - a first set of conductors configured to carry a first voltage, said first set of conductors adapted for electrically coupling the power supply with the plurality of magnetrons; and
 - a second set of conductors configured to carry a second voltage less than said first voltage, said second set of conductors adapted for electrically coupling ~~[[said]]~~ the power supply with the ~~blower~~ at least one low-voltage device.
7. (Original) The electrical cable of claim 6 wherein said first voltage is less than about 10,000 DC Volts and said second voltage is less than about 300 AC Volts.
8. (Original) The electrical cable of claim 6 wherein said first voltage is in the range of about 4,000 DC Volts to about 6,000 DC Volts.

Art Unit: 2821

9. (Original) The electrical cable of claim 6 wherein said first set of conductors is positioned radially inward of said second set of conductors, and further comprising:

a first shield disposed radially between said first set of conductors and said second set of conductors.

10. (Original) The electrical cable of claim 9 further comprising:

a second shield disposed radially outward of said second set of conductors.

11. (Currently Amended) An electrical cable for a lamp system including a power supply, a lamp head having a lamp capable of generating ultraviolet radiation when energized by microwave energy, a plurality of magnetrons supplying microwave energy effective to excite a plasma in said lamp for generating ultraviolet radiation, and ~~a blower~~ at least one low-voltage device, said electrical cable comprising:

a plurality of high-voltage conductors adapted to be electrically coupled with ~~[[said]]~~ the plurality of magnetrons;

a plurality of low-voltage conductors adapted to be electrically coupled with the ~~blower~~ at least one low-voltage device;

an inner shield separating said plurality of high-voltage conductors from said plurality of low-voltage conductors; and

an outer shield surrounding said plurality of low-voltage conductors.

12. (Original) The electrical connector of claim 11 wherein said plurality of high-voltage conductors are positioned in a first circular arrangement radially inside said inner shield and said plurality of low-voltage conductors are positioned in a second circular arrangement between said inner shield and said outer shield.

13. (Original) The electrical connector of claim 12 wherein said inner shield is positioned radially between said plurality of high-voltage conductors and said plurality of low-voltage conductors.

14. (Original) The electrical connector of claim 11 wherein said plurality of low-voltage conductors are more numerous than said plurality of high-voltage conductors.

15-22. (Cancelled)

23. (New) The lamp system of claim 1 wherein said at least one low-voltage device is a blower.

24. (New) The lamp system of claim 1 wherein said at least one low-voltage device is a sensor.

25. (New) The lamp system of claim 24 wherein said sensor is selected from the group consisting of a light sensor and a pressure sensor.

26. (New) The lamp system of claim 1 wherein said at least one low-voltage device is a filament of a corresponding one of said magnetrons.

27. (New) The lamp system of claim 1 wherein said second voltage is less than about 300 AC Volts, and said low-voltage device is adapted to operate at less than about 300 AC Volts.

Reasons for Allowance

3. Claims 1, 3-4, 6-14, and 23-27 are allowed

The following is an examiner's statement of reason for allowance:

Regarding claims 1, 3-4, 6-14, and 23-27, Bretmersky et al. (US 6,265,830) or Fusion Systems corporation (F300S ultraviolet Lamp System Installation, Operation and Maintenance Manual, Manual No. 341701 rev E Date 8/95) disclose a lamp system for generating ultraviolet radiation, comprising: a power supply, a lamp head including a lamp capable of generating ultraviolet radiation when energized by microwave energy. However, Bretmersky et al. (US 6,265,830) or Fusion Systems corporation do not disclose in a lamp head that having a **plurality of magnetrons** supplying microwave energy and **single electrical cable** including a **first set of conductors** electrically coupling said power supply with said plurality of magnetrons and **second set of conductors electrically** coupling said power supply with said at least one low voltage device, said first set of conductors configured to carry a first voltage and said second set of conductors configured to carry a second voltage less than the first voltage..

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance".

Conclusion

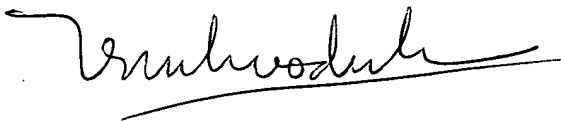
4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hung VY whose telephone number is (571) 272-1954. The

Art Unit: 2821

examiner can normally be reached on Monday-Friday 8:30 am - 5:30pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, DON WONG can be reached on (571) 272-1834. The fax numbers for the organization where this application or proceeding is assigned are (703) 872-9306 for regular communications and (703) 308-7722 for After Final communications.

Information regarding the status of an application may be obtained from the patent Application Information Retrieval (PAIR) system. Status information for published application may be obtained from either private Pair or Public Pair. Status information for unpublished applications is available through Private Pair only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have question on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Hung T. Vy
Art Unit 2821
May 27, 2005

A handwritten signature in black ink, appearing to read 'Hung T. Vy', with a horizontal line drawn underneath it.

Application/Control Number: 10/764,929
Art Unit: 2821

Page 9